

MUHAMMAD ZAIN AFZAL

Full Stack Gen AI Developer

Green Town, Lahore, Pakistan

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Professional Summary

Full Stack Gen AI Developer specializing in building production-ready AI SaaS products from concept to deployment. Expert in developing intelligent data analysis tools, AI-powered web applications, and enterprise solutions using Next.js, MongoDB, and modern AI APIs. Proficient in designing RAG pipelines, autonomous agents, and integrating LLMs into scalable full-stack applications. Proven track record of delivering high-performance AI products handling 1M+ requests weekly with focus on user experience, system optimization, and rapid iteration.

Experience

Qubit Dynamics

Oct 2025 – Present

Full Stack Gen AI Developer

Faisalabad, Pakistan

- Architect and develop end-to-end **AI SaaS products** using **Next.js**, **MongoDB**, and **TypeScript**, delivering production-ready applications from concept to deployment.
- Built **AI-powered data analysis tools** enabling users to query CSV, Excel, and PDF files using natural language, featuring in-browser Python execution and auto-visualization.
- Implement **ReAct agent architectures** with **Gemini AI** and **OpenAI APIs** for intelligent reasoning, automatic code generation, and iterative problem-solving in production applications.
- Design and develop **RAG pipelines** using **LangChain** and **ChromaDB** for document intelligence, enabling semantic search and context-aware AI responses.
- Build scalable backend services with **Next.js API routes** and **FastAPI**, integrating AI endpoints with **MongoDB** for persistent storage and user management.
- Develop AI chat interfaces, PDF document Q&A systems, and real-time data visualization dashboards serving enterprise clients.
- Implement authentication flows with **NextAuth.js**, payment integrations, and subscription management for AI SaaS monetization.
- Optimize AI inference pipelines achieving sub-100ms response times through **streaming responses**, **caching strategies**, and efficient prompt engineering.

Cybergen

Jan 2025 – Oct 2025

Junior AI Engineer

Faisalabad, Pakistan

- Designed, fine-tuned, and deployed **LLMs** and **multimodal models** for enterprise use cases including customer support automation.
- Built scalable **FastAPI** backends to serve AI/ML models with low-latency inference and high availability.
- Developed **RAG pipelines** using **LangChain** and **ChromaDB** for domain-specific intelligent chatbots.
- Integrated AI endpoints into production systems via secure **REST** and **WebSocket APIs** with comprehensive error handling.
- Optimized model performance through quantization, batching, and asynchronous request handling techniques.
- Collaborated with product teams to ship AI-driven features improving user engagement and decision-making workflows.

Tech Wizardz

Mar 2024 – Dec 2024

Full Stack Developer

Remote

- Led development and maintenance of 5+ web applications using **React.js**, **Node.js**, and **MongoDB**.
- Designed and implemented **RESTful APIs** with optimized database queries reducing response time by 30%.
- Collaborated with stakeholders for requirement gathering, sprint planning, and timely project delivery using Agile methodologies.
- Implemented responsive UI components and integrated third-party services for enhanced functionality.

Education

University of Lahore

Expected Graduation: 2026

Bachelor of Science in Information Engineering Technology

Lahore, Pakistan

Projects

PaperPilot - AI Data Analysis SaaS <i>Next.js, TypeScript, Python, Gemini AI, Pyodide, WebAssembly</i>	2025
<ul style="list-style-type: none">Built production AI SaaS platform enabling users to upload CSV, Excel, or PDF files and analyze data using natural language queries.Implemented ReAct agent architecture with Gemini AI for step-by-step reasoning, automatic Python code generation, and iterative data exploration.Integrated Pyodide for secure in-browser Python execution with Pandas, NumPy, and Matplotlib - zero server-side data processing.Developed PDF chat feature for document Q&A, summaries, and information extraction with complete client-side privacy using WebAssembly.	
LeetCode Gang <i>React, TypeScript, Supabase, OpenAI API</i>	2025
<ul style="list-style-type: none">Built AI-powered coding discussion platform with Google authentication and AI-generated code solution posts.Implemented Supabase authentication and OpenAI API for intelligent content generation.	
UOL AI-Powered Chat App <i>React, TypeScript, Tailwind CSS, AI APIs</i>	2025
<ul style="list-style-type: none">Developed real-time AI chat application with Slide-to-AI Reply and UOL GPT image generation capabilities.Implemented seamless UI with Framer Motion animations and fully responsive design.	
IET Study Hub <i>React, TypeScript, Tailwind CSS</i>	2025
<ul style="list-style-type: none">Created AI-powered study blog platform for publishing AI-generated educational content and study materials.	
UOL GPA Calculator <i>React, TypeScript, Tailwind CSS</i>	2025
<ul style="list-style-type: none">Built GPA calculator for academic performance tracking with intuitive user interface and semester management.	
ChatGPT Clone (Grey Ghost Chat) <i>React, TypeScript, OpenAI API</i>	2024
<ul style="list-style-type: none">Developed AI chatbot with OpenAI API integration featuring real-time conversation handling and responsive interface.	
Zain and Co - Luxury E-Commerce <i>React, TypeScript, Framer Motion</i>	2024
<ul style="list-style-type: none">Built luxury e-commerce store with smooth UI animations and premium user experience using Framer Motion.	
Drawing Math Solver <i>React, TypeScript, Tesseract.js</i>	2024
<ul style="list-style-type: none">Built OCR-powered application solving handwritten math problems using Tesseract.js computer vision.	

Technical Skills

Languages: JavaScript (ES6+), TypeScript, Python, HTML5, CSS3, SQL
Frontend: React.js, Next.js 14, Tailwind CSS, Framer Motion, Shadcn/UI, Responsive Design
Backend: Node.js, Express.js, Next.js API Routes, FastAPI, REST APIs, WebSocket, GraphQL
AI/ML: LangChain, OpenAI API, Gemini API, Claude API, RAG Pipelines, ReAct Agents, Prompt Engineering, Pyodide
Databases: MongoDB, PostgreSQL, ChromaDB, Supabase, Firebase, Redis, Prisma ORM
Cloud/DevOps: AWS (ECS, S3, Lambda), Vercel, Docker, CI/CD Pipelines, Serverless
Tools: Git, GitHub, VS Code, Postman, Jupyter Notebooks, Hugging Face

Core Competencies

AI SaaS Development: End-to-End Product Development, AI Data Analysis Tools, Document Intelligence, Chat Interfaces
Gen AI Engineering: RAG Pipelines, ReAct Agents, LLM Integration, Prompt Engineering, Streaming Responses
Full Stack: Next.js 14, MongoDB, TypeScript, Authentication, Payment Integration, Subscription Management
System Design: Microservices, Serverless Architecture, API Design, Real-time Processing, Scalable Systems

Soft Skills

Leadership: Cross-functional Team Collaboration, Stakeholder Management, Technical Documentation
Problem Solving: Critical Thinking, Algorithm Design, Performance Optimization, Debugging
Project Management: Agile/Scrum Methodologies, Sprint Planning, Requirement Gathering

Certifications

Intro to AI Engineering - Scrimba <i>Credential ID: 4LFT2WY1XS0F</i>	Mar 2025
Learn AI Agents - Scrimba <i>Credential ID: EJS513JTFG8J</i>	Mar 2025
Crash Course on Python - Google <i>Credential ID: 1L69KG93RRQK</i>	Feb 2025
Generative AI for Software Development - DeepLearning.AI <i>Credential ID: K1BJJAR8566G</i>	Feb 2025
Team Software Engineering with AI - DeepLearning.AI	Jan 2025
Responsive Web Design - freeCodeCamp <i>Credential ID: sheikhmuhammadzain-rwd</i>	Jul 2024

References

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AI Product Manager, CyberGen — Director Operations